

Marine and Estuarine Goal Setting (MARES)

The Cooperative Institute for Marine and Atmospheric Studies (CIMAS) is leading the [MARES](#) effort to reach a science-based consensus about the defining characteristics and fundamental regulating processes of a South Florida coastal marine ecosystem that is both sustainable and capable of providing the diverse ecological services upon which our society depends. MARES is a three year project funded by the National Oceanic and Atmospheric Administration's Center for Sponsored Coastal Ocean Research. MARES represents a unique collaboration amongst academic and government natural and human dimensions scientists working with public and private stakeholders. The first step in the MARES process is to develop Integrated Conceptual Ecosystem Models (ICEMs) for critical sub-regions (Southwest Florida Shelf, Florida Keys and Southeast Florida shelf). These models and a series of subsequent meetings and stakeholder briefings will be used to identify quantitative ecosystem indicators MARES will ultimately yield an integrated South Florida Marine Ecosystem Report Card to assist in implementing ecosystem based management (EBM) throughout South Florida.

Background: EBM is a focus in several NOAA initiatives including Integrated Ecosystem Assessments (IEAs) and Coastal and Marine Spatial Planning (CMSP). Effective EBM requires integrating the best available human- and natural-system information. MARES hopes to provide a model process for this integration through: 1) ICEM development, 2) indicator selection, 3) ecosystem assessment, and 4) reaching a societal consensus on ecosystem goals.

Significance: The development and subsequent utilization of science-based ecosystem goals that incorporate both the human- and natural-systems will represent significant progress towards enacting EBM in south Florida. The MARES process can then be emulated in other coastal regions for IEA, CMSP and other EBM purposes. This project responds to NOAA's mission goal for healthy oceans and furthers CIMAS research themes that investigate regional coastal ecosystem processes and human interactions with the environment.

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OAR is strengthening the format and the type of information we are submitting as "Hot Items". Recall that the "Hot Items" page is used by OAR and NOAA senior management to learn about the research that is being funded and conducted by NOAA. I've asked Paul Turner, now working with me in the CI office) to review the Hot Item submissions to make sure that the appropriate scientific and programmatic information is included. Alice will still continue to receive your submissions and forward them to Paul before she eventually posts them on the Web. The schedule will not change. We might make a few special requests for information, however, if there is a particular interesting research project happening that is relevant to some exciting current news item. At any time, we will also consider posting any exciting NOAA-funded research that you want to submit. The following guidelines shall be used when submitting "Hot Items":

- 1) Articles need to be provided as a Word document attachment.
- 2) The title should be no longer than 75 characters in length.
- 3) Articles should not exceed 3 brief paragraphs or 300 words.
- 4) Graphs charts, photos or lists with bullets should not be included.
- 5) Web links within the text or at the bottom of the article are acceptable.
- 6) Articles *must* explain the relevance or importance of an event or issue: who, when, where, and why it is being highlighted. Specifically, each submission should include a brief background summary.
- 7) Identify both the university and the collaborating NOAA OAR laboratory/program involved in the research and, if applicable, any other NOAA Line Office(s) that also provided funding for the research.
- 8) All acronyms used in the article should be defined.

Example:

Multiple-Use Coastal Stations for Indian Ocean Sea Level and Tsunami Monitoring at the Joint Institute for Marine and Atmospheric Research (JIMAR): Following the example in the Pacific, the Indian Ocean Tsunami Warning System (IOTWS) will rely on a network of coastal stations as well as Deep-ocean Assessment and Reporting of Tsunamis (DART) buoys for detecting tsunami waves. As a starting point for the coastal station array, the Intergovernmental Oceanographic Commission (IOC) is promoting the upgrade of existing Global Sea Level Observing System (GLOSS) tide gauge stations in the region to tsunami warning capability. While the traditional stilling well/float gauges proved to be sufficient for recording the large (>2 m), short period (<40 minute) wave signals, the University of Hawaii Sea Level Center (UHSLC) is embarking on an ambitious program to configure GLOSS stations as multiple-use platforms, robust enough to sample the full extent and fast response of a tsunami or storm surge, yet stable and reliable enough to provide information on longer-term sea level variations. Data from 4 UHSLC stations in the region are already being transmitted via satellite to the Pacific Tsunami Warning Center (PTWC) at 15-minute intervals. Plans for an additional 20 stations are under way.

Background: The Great Tsunami of 2004 has led to an international drive to build the Indian Ocean Tsunami Warning System (IOTWS). The UHSLC, a project within the Office of Oceanic and Atmospheric Research (OAR)s Joint Institute of Marine and Atmospheric Research (JIMAR) that is supported by NOAA's Office of Global Programs, maintains the majority of GLOSS stations in the Indian Ocean that were capable of measuring the December 2004 tsunami event in near-real time (<http://ilikai.soest.hawaii.edu/uhscl/iot1d/index.html>). JIMAR is a NOAA Cooperative Institute at the University of Hawaii. JIMAR conducts collaborative research with NOAA in equatorial oceanography, tsunamis, climate, tropical meteorology, fisheries oceanography, and coastal processes. JIMAR receives funding primarily from NOAA Research and NOAA Fisheries.

Significance: A reliance on multiple-use coastal stations, with a broad user base, maximizes the likelihood of continued maintenance and operation of the observing system for the benefit of generations to come. The network supports NOAA's Mission Goals to serve society's needs for weather and water information and to understand climate variability and change.